

(Demo) Annual Narrative



FWSANV-0178

QUARTERLY REPORT OF ACTIVITIES 32

Period of May 1 to July 31, 1936 22

MALHEUR MIGRATORY WATERFOWL REFUGE 37

**** - ****

United States Department of Agriculture
Bureau of Biological Survey

Burns, Oregon

the Interior

40

27

13

MALHEUR REFUGE RECORDS FAVORABLE GENERAL CONDITIONS

General weather and water conditions of a favorable nature prevailed throughout the months of May, June, and July. May and June in this locality saw only moderately warm weather, as shown on the weather chart below, while other parts of Oregon, as well as most the Western States, were sweltering in perhaps the worst heat wave occurring in many years.

July 1938 started with extraordinarily moderate temperatures for any summer season, with the first five days of the month recording a total of approximately 1.1 inches of rainfall. This amount of precipitation, coming as it did at the most opportune time, greatly aided in reducing the ordinarily excessive rate of evaporation of all water surfaces, as well as furnished refreshment for many outlying pools which could not be replenished in any other manner.

The following weather recordings were made at Malheur Refuge:

<u>Sod House Weather Bureau Station</u>			
<u>Weather Data--May, June, July 1938--Summary</u>			
<u>Month</u>	<u>Total Inches</u>	<u>Maximum</u>	<u>Minimum</u>
	<u>Precipitation</u>		
	<u>During Month</u>	<u>Temperature</u>	<u>Temperature</u>
May	.63	86	25
June	1.42	87	31
July	1.19	96	44
<hr/>			
Total Precipitation 3.24			
Max. Temperature 96			
Min. Temperature 25			

As stated in 1938 Malheur Refuge Annual Report, this area enjoyed the best water conditions this spring and summer than for many years past, not only from the standpoint of run-off from the Steens Mountains, but also from the standpoint of rainfall--with an average of 1.08 inches for each month of the three being covered by this report.

The run-off from the Blitzen watershed continued well into the month of June, which allowed a substantial flow of water into Malheur Lake up to about July 1, and resulted in the lake level rising from 4091.12 feet elevation as of March 9 to 4092.7, maximum level on July 14--this being the only reading taken in July.

Once Malheur Lake attained this unusually high level, sufficient flow from the Blitzen was available until late July to maintain such a level, however, early August saw a marked loss in water surface on that area because of evaporation and the enormous quantity consumed by the aquatic vegetation. Many water areas in the Blitzen Valley, of course, were reduced or dried up entirely because of the necessity of closing diversion canals to exclude water from hay and grazing meadows.

The week of July 17 to 23, with temperatures averaging close to 95 in the daytime and correspondingly warm nights, brought some fear of an epidemic of duck sickness on Malheur Lake, when about a hundred dead ducks, showing evidence of food poisoning, were observed in several areas. Luckily, July 27, 28, and 29, heralded cooler weather, and each of these three days brought high wind storms accompanied by intermittent showers--all of which can be considered a Godsend. These strong winds shifted the waters of the lake and undoubtedly relieved a situation which otherwise might have been quite serious.

INFORMATIONAL WILDLIFE DATA ASSEMBLED

Nesting and brood studies relating to waterfowl were both given considerable time this season by a junior biologist of the Wildlife Research division. Although considerable data has been gained, final analysis thereof has not been effected.

The charts shown on the succeeding pages were assembled from data gained by these studies. These should provide some basis for speculation as to our total nesting population of the species represented, however, this office is reticent to venture out on the limb of conjecture.

Waterfowl Nesting Data -- Malheur Refuge
Period of March 26 to July 31, 1938

Species	Number of Nests Observed By Units of Refuge Area								Total Nests Studied	Average No. Eggs Per Nest	Total Number Eggs	Remarks
	1	2	3	4	7	8	12	Other				
Mallard	6	14	29	7	0	66	12	1**	135	9.02	1219	
Pintail	6	2	1	3	0	13	3		28	7.75	217	
Gadwall	6	2	0	5	0	17	18		48	9.75	468	
Shoveller	1	1	0	1	0	5	2		10	8.90	89	
Cin. Teal	5	7	0	2	0	38	1		53	8.49	450	*
Baldpate	0	0	0	0	0	0	1		1	8.0	8	
Ruddy	0	0	0	0	0	3	0		3	8.0	24	
Redhead	0	2	0	1	0	5	6		14	11.71	164	
Canvasback	0	1	0	1	0	8	1		11	13.0	143	
Lesser Scaup	0	0	0	0	0	1	0		1	10.0	10	
Other Nests @@	1	6	0	1	0	14	2		24	5.29	127 @@	
Canada Goose	3	17	19	2	73	39	113	9 ***	275	4.68	1287	
Sandhill Crane	0	1	0	2	0	8	0		11	1.9	21	

Explanatory: * Some of these nests may have been Blue-winged Teal.

** This nest observed in Unit 6.

*** These nests noted on rimrocks bordering Blitzen Valley.

@@ These nests observed as ducks but unidentified as to species.

WATERFOWL BROOD DATA -- MALHEUR REFUGE

Period of April 15 to July 31, 1938

Brood Species	Classification of Broods by Sizes--Throughout Refuge														
	1			2			3			4			5		
	Young Broods Aver.			Young Broods Aver.			Young Broods Aver.			Young Broods Aver.			Young Broods Aver.		
Mallard	175	20	8.75	140	16	8.74	142	20	7.1	184	26	7.07	32	4	8
Gadwall	410	52	7.88	585	69	8.47	156	18	8.66						
Pintail	41	6	6.83	60	9	6.66	19	3	6.33	30	4	7.5			
Cin. Teal	163	20	8.15	57	7	8.14	80	11	7.27	56	9	6.22			
G.w. Teal	20	3	6.66	6	1	6.0				8	1	8.0			
Shoveller	95	13	7.31	88	11	8.0	18	4	4.5	45	6	7.5			
Redhead	210	26	8.08	331	37	8.94	57	8	7.13						
Canvasback	81	12	6.75	75	11	5.81	2	1	2.0						
Baldpate	44	5	8.8	12	1	12.0									
Ruddy	99	15	6.6	65	7	9.22	3	1	3.0						
L. Seaup	28	5	5.6												
Others (Unidentified)	47	7	6.71	41	4	10.25	34	4	8.5						

First Canvasback nest to be recorded on Malheur Lake Found June 14, 1938, picture taken that date also. Nest contained 10 eggs, built in heavy tule growth, over $3\frac{1}{2}$ to 4 feet of water. Female bird seen leaving nest and light downy covering positively identified the nest.



Young Gulls (California & Ring-billed) on haystack in Malheur Lake, with many adults in flight overhead. Exposure made June 14, 1938.



Gulls, Pelicans, and Terns nesting on old sunken haystack in middle of Malheur Lake/ where Pelicans and Gulls again took up nesting abode in 1936 after absence of about 10 years. Exposure taken June 14, 1938.

As stated in our recently-submitted annual report, Lesser Scaup ducks were observed for the first time this year making nesting use of this Refuge, while Canvasbacks, first reported in 1937, have become common throughout the area with their broods. The first Canvasback nest with 10 eggs on the Malheur Lake area was recorded this year on June 14.

From observations made throughout the Refuge, and based upon the brood chart on the preceeding page, we believe that Gadwall ducks built more nests and raised more young than any other species on the area, with Mallards running a close second.

Pelicans, gulls, terns, herons, grebes, avocets, curlews, etc., all contributed generously to the propagation of bird life on Malheur. The old haystacks of former years on the Lake have settled and disintegrated to the extent where little more than a resemblance of floating, rotting rafts protrudes irregularly out of the water. As evidenced by the pictures on the opposite page, great colonies of various species, including, gulls, pelicans, and terns, used these old stacks to considerable nesting advantage.

Ringnecked Pheasants are believed to be steadily on the increase, although no broods were noted during the past season. The large hay meadows of the P Ranch area no doubt offers sufficient food and cover for this species so that it is unnecessary for them to venture near the travelled routes, and accordingly, any existing broods are seldom seen.

Sage Hens are definitely on the increase on the Refuge area, since during July we have noted many scattered individuals and several concentrations made of young birds of this year's hatch. One group of this species seen in late July numbered more than 20 individuals.

Mourning Doves are commonly seen throughout the area, and are much more numerous than heretofore. Many pairs were noted during the mating season and some slight concentrations were in evidence in the Blitzen Valley during the past month.

Quail have evidently failed to gain a foothold in this area after the severe winter of 1936-37, while European Partridge have been noted intermittently, but never in any great numbers.

Pelicans and Gulls on
old haystack in center of
Malheur Lake where a great
number of both species nested
during 1938 season. Picture
taken June 14, 1938



Young Pelicans in nest on
old haystack. Note other nest
with single egg in center of
picture, and tall tule growth
in background. This stack
located in Malheur Lake where
it is entirely surrounded by
water. Taken June 14, 1938.



The Division of Predator and Rodent Control maintained a hunter on Malheur Refuge throughout May, June, and July of this year, and according to the District Agent's monthly reports, the local representative of that division accounted for the following predators:

<u>Month</u>	<u>Coyotes Killed</u>	<u>Bobcats Killed</u>
May	12	1
June	17	
July	33	1

No predatory animals whatever were killed by Refuge personnel during the period under consideration.

Bird banding activities in May, June, and July of 1938, added the following to Malheur's banding achievements:

<u>Date Banded</u>	<u>Species</u>	<u>Quantity</u>	<u>Sex</u>
June 8, 1938	Mallard	1	J
	Canvasback	1	J
July 1, 1938	Gulls	334	J
5	Pintails	49	J
6	Gulls	251	J
13	Egrets	38	J
	Blue Heron	3	J
19	Egrets	19	J
	Blue Heron	3	J
20	Blkernd Night Heron	51	J
	Blue Heron	10	J
	Pelicans	14	J

Total Birds Banded 774

Inasmuch as all the above birds were juveniles, it was impossible to definitely determine the sex of each, therefore, they were reported accordingly.

Steps were taken to repair and remodel the banding trap in the Buena Vista area so that when the fall migrations start arriving here, which will be soon, we will be in a position to trap considerable numbers if conditions are favorable.

CCC CONTINUES DEVELOPMENT WORK ON MALHEUR IN JULY

Inasmuch as complete data was furnished in the Malheur Refuge 1938 Annual Report on all developments up to June 30, 1938, we are including herein only the accomplishments on the area subsequent to the expiration of last fiscal year.

REFUGE DEVELOPMENTS IN JULY

<u>Type of Development</u>	<u>Finished Quantity</u>	<u>Location</u>
Vehicle Bridge Construction	1 ea	Unit 7.
New Fence Construction	7 $\frac{1}{2}$ mi.	Refuge Boundary
Levee & Dyke Construction	9328 cu. yds.	Units 6 & 7.
Telephone Line Constr.	4 miles	Narrows to Sod House Line
Truck Trails	3.2 Mi.	Center Patrol road
Excav. Channels (Earth)	29,000 cu. yds.	Eastside Boca Lake
Excav. Channels (Rock)	4,152 cu. yds.	Eastside canal

In addition to the above, considerable effort was spent on general cleanup of the area, razing undesirable structures, and transportation of materials.

No aquatic planting was done within the past three months, however, considerable growth was made by all the desirable aquatic vegetation previously established on the Refuge. Duck weed made considerable gains in all shallow areas of Malheur Lake as well as the Blitzen Valley. Other aquatic plants which were noted to have spread into the many water areas included the following: Dwarf Spikerush, Common Spikerush, Waterweed, Water Plantain, Duck Potato, Musk Grass, Pepper Wort.

Sago Pond Weed made unusual growth throughout Malheur Lake and extended into many of the ditches, canals, and ponds of Blitzen Valley.

The May plantings of wheat and barley in the Grain Camp area (Unit 6) grew exceptionally well. A recent inspection of the approximately 70 acres of the former and 230 acres of the latter species revealed that both would produce bumper crops if the hordes of blackbirds could be controlled. These areas were sowed and cared for by Government labor, and only sufficient grain will be harvested to cover our seed requirements for next year, leaving the balance for use of birds.

Approximately 4500 willow plantings were placed along the Malheur Lake dyke during May and June by CCC labor for protection against wave action.

PUBLIC RELATIONS ACTIVITIES BRINGING RESULTS

Malheur's camp ground development plans were greatly delayed and no camping facilities were available during past months, however, inasmuch as the plans are not too extensive and are now on hand, it is believed that this development will be complete prior to the passing of another year.

The Blitzen River did not reach summer level until early July and little or no fishing was available until July 1. It is estimated that 75 man days angling recreational use was made of the water open to fishing within the Refuge, however, we have no information on the number of Rainbow Trout, the only species of game fish in these waters, were taken. The major number of man days of this use was accumulated on weekends or holidays, however, many small parties of anglers were fishing under permit on the Refuge on week days.

No violations of Refuge regulations were noted during any month of the three just past, except a minor number of trespass cattle which were promptly removed by our ever-alert range riders.

ECONOMIC USES OF REFUGE AREA RESTRICTED DURING NESTING

By adherence strictly to policy, no stock whatever were allowed on the Refuge meadows during April, May, June, and up to July 15. July 15 heralded the opening of the haying season and the mowers began to hum shortly thereafter.

The following permits were issued recently by the Washington Office for various uses on the Refuge:

<u>Permittee</u>	<u>Area</u>	<u>Use</u>
Judd Wise	Sod House Ranch	Haying & Grazing
J. H. & Fred Witzel	Witzel-Krumbo Area	General Ranching
C. C. Barnes	Barnes Area	General Farming
Clyde Weittenhiller	Happy Valley Area	Grazing
J. L. Bradeen	Frenchglen Property	Postoffice, store, etc.
Paul Stewart	New Diamond Ranch	Haying & Grazing

A share-cropping agreement is being drawn up to cover the cooperative arrangement under the J. H. & Fred Witzel permit whereby approximately 90 acres of grain would be cultivated and planted in barley, of which one-third share of the harvest will be turned over to the Refuge for wildlife feeding use. Harvest operations will begin about September 10.

MALHEUR REFUGE DRAWS MANY VISITORS RECENTLY

Many interested and interesting visitors reviewed this area and its bird life recently. An interested conservationist from British Columbia was conducted over the Refuge in May. A group of nature course teachers demanded the attention of the Refuge Superintendent for a one-half-day period. Each Sunday and holiday has brought from two to a half-dozen carfuls of tourists or vacationists.

In conjunction with the annual Hart Mountain Order of Antelope Meeting, a tour of Malheur Refuge was sponsored by the Burns Chamber of Commerce. Thirty-six attendants of the Hart Mountain festivities journeyed over the wasteland of central Harney county from the Antelope grounds to the bird haven where they were shown the many developments and much of the bird life.